REMARKS

Claims 1, 3, 6, 9 and 11-18 are currently pending in the application; with claim 1 being independent. Claims 1, 3, 6, 9 and 11-18 were pending prior to the Office Action. In the current amendment, claims 1, 6, 9, 13, 15 and 16 have been amended.

The Examiner is respectfully requested to reconsider the rejections in view of the amendments and remarks set forth herein. Applicant respectfully requests favorable consideration thereof in light of the amendments and comments contained herein, and earnestly seeks timely allowance of the pending claims.

Claim Rejections – 35 USC §103

The Examiner rejected claims 1, 3, 6, 9 and 11-18 under 35 U.S.C. § 103(a) as being unpatentable over US 6,411,552 ("Chiba") and further in view of US 7,155,559 ("Estakhri") and US 7,050,190 ("Yamazaki").

The Applicant respectfully traverses this rejection. Applicant respectfully submits the Examiner has failed to establish a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness, the Examiner has the burden of meeting the basic criterion that the prior art must teach or suggest all of the claim limitations.

Regarding this basic criterion, the Applicant submits that Chiba, Estakhri, Yamazaki and any combination thereof (assuming the references may be combined, which Applicant does not admit) do not disclose or suggest "allocating a specific area having a frequently changing information to at least one page in one block of the plurality of blocks, wherein pages in said block each contain an area for recording area management information including information indicating an unused area, an allocated area, a disabled area, or an ordinary recording area; and disabling remaining pages in said one block when said allocating step allocates the frequently changing information to said at least one page in said one block, wherein said remaining pages include at least one page, wherein the frequently changing information is managing data recorded in the recording medium or root directory information" as recited in claim 1.

For a Section 103 rejection to be proper, a *prima facie* case of obviousness must be established. *See M.P.E.P. 2142.* One requirement to establish *prima facie case* of obviousness

is that the prior art references, when combined, must teach or suggest all claim limitations. *See M.P.E.P. 2142; M.P.E.P. 706.02(j).* Thus, if the cited references fail to teach or suggest one or more elements, then the rejection is improper and must be withdrawn.

Chiba merely discloses a memory allocation system, which includes a block erasing type memory device including a plurality of blocks. The block erasing type memory device is capable of erasing stored data collectively in units of one block. The data processing means includes a formatting portion connected to the block erasing type memory device according to formatting information for substantially coinciding size and position of a cluster as a logical unit of a memory region of the block erasing type memory device (col. 2, lines 11-38; col. 5, 50-60).

On page 2 of the Office Action (in the Response to Arguments section) the Examiner mentioned Fig. 4 of Chiba and stated that in block 2, FAT is stored in the first three pages of the 16 pages of the block, and directory is stored in the remaining 13 pages. Applicant points out that Fig. 4 indicates that block 2 has FAT and directory region information, and this block composition does not teach the allocating and disabling steps recited in claim 1, because claim 1 recites "allocating a specific area having a frequently changing information to at least one page in one block [...]; and disabling remaining pages in said one block when said allocating step allocates the frequently changing information to said at least one page in said one block, wherein said remaining pages include at least one page." In Fig. 4, if the directory region were considered to be frequently changing information, then block 2 does not have <u>disabled remaining pages including at least one page</u>, because all pages in block 2 would be occupied by frequently changing information. If, on the other hand, the directory region does not represent frequently changing information, then block 2 <u>does not disable remaining pages</u> when frequently changing information (such as FAT) is allocated to at least one page. The remaining pages in block 2, in this second case, are occupied by the directory information and are not disabled.

Furthermore, regardless of whether FAT and directory in Chiba are allocated in the same cluster or separately, Chiba does not teach that <u>in a block where a specific area having a frequently changing information is allocated to at least one page, the remaining pages (which include at least one page) are disabled</u>, as claim 1 recites.

MRC/CET

On page 3 of the Office Action, the Examiner acknowledges that Chiba fails to teach that pages in a block each contain an area for recording area management information. The Examiner then makes general allegations that "it is well known in the art that the 16 bytes are used for storing various management information" and gives the examples of Estakhri and Yamazaki which "are included as reference for such teaching." Applicant points out that claim 1 recites that pages in said block each contain an area for recording area management information including information indicating an unused area, an allocated area, a disabled area, or an ordinary recording area. The Examiner has not proved that the type of area management information recited in claim 1 (area management information including information indicating an unused area, an allocated area, a disabled area, or an ordinary recording area) is disclosed as being contained in each page of a block in Estakhri or Yamazaki.

With respect to Examiner's comments on page 4 of the Office Action regarding Figs. 16 and 17 in Chiba, Applicant points out that in Figs. 16 and 17 Chiba does not illustrate that pages in a block each contain an area for recording area management information including information indicating an unused area, an allocated area, a disabled area, or an ordinary recording area. The identification flag employing the value "FFh" illustrated in Fig. 17 does not appear to indicate an area for recording area management information including information indicating an unused area, an allocated area, a disabled area, or an ordinary recording area.

In the Office Action, the Examiner referred to the flag FFh in Chiba which is written at a head of a cluster group in which the FAT and directory are written.

Applicant submits that Chiba does not teach or suggest that multiple pages in one block each contain an area for recording area management information. Even if flag FFh were indicating presence of an area for management information (which Applicant does not admit), Applicant points out that flag FFh is not present in multiple pages in one block.

Examiner's comments on page 4 of the Office Action do not prove that Chiba discloses "allocating a specific area having a frequently changing information to at least one page in one block of the plurality of blocks, wherein pages in said block each contain an area for recording area management information including information indicating an unused area, an allocated area, a disabled area, or an ordinary recording area; and disabling remaining pages in said one block

MRC/CET

when said allocating step allocates the frequently changing information to said at least one page in said one block, wherein said remaining pages include at least one page" as explained below.

Claim 1 recites that pages in a block <u>each contain</u> an area for recording area management information including information indicating an unused area, an allocated area, a disabled area, or an ordinary recording area. Hence, in the method recited in claim 1, each page among multiple pages in a block contains an area for recording area management information.

If the identification flag "FFh" in Chiba were considered, *in arguendo*, to indicate an area for recording area management information (which Applicant does not admit), the flag "FFh" is only present at <u>one head of cluster group 1</u> (Fig. 17, col. 19 lines 55-57). The flag "FFh" is not present in a <u>plurality of pages in the block containing a FFh flag.</u> Thus, if the top block in Fig. 17 of Chiba were to be completely filled by the flag FFh and some of the FAT/directory region data, then this top block would not have <u>remaining disabled pages which include at least one page,</u> as claim 1 requires.

If, on the other hand, the identification flag "FFh" in Chiba were not considered to indicate an area for recording area management information, then the block including the FFh flag is not a block where a specific area having a frequently changing information is allocated to at least one page, <u>and the remaining pages (which include at least one page) are disabled</u>, as claim 1 requires.

Furthermore, Chiba explains that "as shown in FIG. 17, an identification flag employing the value "FFh" which cannot be used by ordinary data is written at a head of a cluster group in which the FAT and directory are written. <u>On the other hand, the cluster group in which the FAT and directory are not written is an empty block</u>. Further, each identification code (not shown) is attached to the head of the FAT region and directory region." Thus, Chiba teaches an empty block (which is not a block where a specific area having a frequently changing information is allocated to at least one page, as claim 1 requires), or a block in which flag FFh and FAT and directory region is written (which is also not a block where a specific area having a frequently changing information is allocated to at least one page, and the remaining pages, which include at least one page, are disabled, as claim 1 requires).

MRC/CET

Chiba does not teach or suggest that that in a block where a specific area having a frequently changing information is allocated to at least one page, the remaining pages (which include at least one page) are disabled, as claim 1 requires. The paragraph in Chiba which explains that "FIG. 16 is a diagram showing particular cluster groups for storing data of the FAT and directory according to this embodiment. As shown here, the particular cluster group includes two groups, cluster group 1 and cluster group 2, in any one of which the FAT and directory are to be written" only states that FAT and directory can be written in cluster group 1 (which includes blocks 2 and 3) or in cluster group 2 (which includes blocks 4 and 5). However, there is no teaching in Chiba that if the size of the FAT and directory grows, it is necessary to allocate more than one block which has a portion which stays empty, as the Examiner alleged. The cluster group 1 in Fig. 17 represents 2 blocks (as illustrated in Fig. 16), and it is not clear from Chiba that the crossed-out section located below Directory in Fig. 17 is present in the same block as the FAT and Directory portions. Based on Chiba's teaching that "the cluster group in which the FAT and Directory are not written is an empty block" (col. 19 lines 57-59) it would appear that the crossed out portions in Fig. 17 represent entire empty blocks.

Hence, Fig. 17 of Chiba does not teach "allocating a specific area having a frequently changing information to at least one page in one block of the plurality of blocks, wherein pages in said block each contain an area for recording area management information including information indicating an unused area, an allocated area, a disabled area, or an ordinary recording area; and disabling remaining pages in said one block when said allocating step allocates the frequently changing information to said at least one page in said one block, wherein said remaining pages include at least one page, wherein the frequently changing information is managing data recorded in the recording medium or root directory information", because Chiba does not teach that at least one page including the FAT/Directory in Fig. 17 contains an area for recording area management information including information indicating an unused area, an allocated area, a disabled area, or an ordinary recording area, and because Chiba does not teach that a block contains multiple FFh flags, or an FFh flag and additional pages which are disabled. The FFh flag is only written at a head of a cluster group in which the FAT and directory are

MRC/CET

written, but not necessarily in every block. Furthermore, at col. 19 lines 58-59 Chiba explicitly teaches that the cluster group in which the FAT and directory are not written is an empty block.

Furthermore, Chiba only discloses that the identification flag employing the value "FFh" cannot be used by the ordinary data: "an identification flag employing the value FFh which cannot be used by ordinary data is written at a head of a cluster group in which the FAT and directory are written" (col. 19, lines 48-61). Chiba does not teach that the remaining pages in the block in which the flag "FFh" is stored are disabled and cannot be used by the ordinary data.

On page 8 of the Office Action, the Examiner refers to the "present application specification page 3" in the rejection arguments. Applicant points out that Applicant's disclosure cannot properly be relied upon by the Examiner in a rejection. *Panduit Corp. v. Dennison Mfg. Co.*, 774 F.2d 1082, 227 USPQ 337 (Fed. Cir. 1985). In this regard, it has been commonly understood that it is impermissible for an Examiner to simply engage in hindsight reconstruction of the claimed invention, using Applicant's structure as a template and selecting elements from references to fill in the gaps. *In re Gorman*, 18 USPQ2d 1885 (Fed. Cir. 1991). Even the recent Supreme Court decision in *KSR v. Teleflex*, 550 U.S. 398, 127 S. Ct. 1727 (2007) has not changed the prohibition of the Examiner engaging in improper hindsight reconstruction of the claimed invention.

Applicant also submits that the Examiner has suggested the present combination of references to meet the terms of the claims, not by merely taking into account knowledge that was within the level of ordinary skill at the time the claimed invention was made, but by using knowledge gleaned from Applicant's disclosure and then picking and choosing references based upon this gleaned knowledge. For Example, the Examiner generally states that "Chiba, Estakhri and Yamazaki combined teach disabling remaining pages in said one block when said allocating step allocates the frequently changing information to at least one page" (page 8 of Office Action, second paragraph). However, it is not clear that Estakhri and Yamazaki disclose "recording area management information including information indicating an unused area, an allocated area, a disabled area, or an ordinary recording area". Furthermore, none of Chiba, Estakhri and Yamazaki discloses or suggests that in a block where a specific area having a frequently

MRC/CET

changing information is allocated to at least one page, the remaining pages (which include at least one page) are disabled, as claim 1 requires.

In the present Reply, Applicant has also amended claims 6 and 9. The amendments to claims 6 and 9 are supported by, at least, paragraphs [0066]-[0074] (Figs. 9-10) of the patent application publication of the present application US 20040213070. The amendment to claim 13 is supported by, at least, paragraph [0015] of US 20040213070.

Amended claim 6 depends from claim 1 and further recites "wherein the specific area is a data management area in which the managing data is stored as the frequently changing information, said method further comprising steps of: (6a) writing data into an unused block of the recording medium when a writing data operation is performed to the recording medium; (6b) reading contents of the data management area in said one block in the recording medium, the contents being the managing data; (6c) modifying the contents of the data management area in relation to the written data; (6d) writing the modified contents of the data management area into pages of another unused block in the recording medium; (6e) disabling other pages in said another unused block of the step (6d), wherein the modified contents were not written in said other pages; and (6f) erasing the contents of the data management area in said one block, and turning said one block , into an unused block."

With respect to claim 6, Applicant submits that Estakhri and Yamazaki are not concerned with a specific area which is a data management area in which managing data is stored as frequently changing information. Estakhri and Yamazaki also do not disclose or suggest modifying the contents of the data management area in relation to the written data, writing the modified contents of the data management area into pages of another unused block in the recording medium, disabling other pages in the another unused block, and erasing the contents of the data management area in the one block, and turning the one block into an unused block. Writing the modified contents of the data management area into pages of another unused block in the recording medium and disabling other pages in the another unused block is not disclosed by Estakhri and Yamazaki. For example, in Figs. 10A-B in Yamazaki, disabling other pages in a block after writing modified contents of a data management area into pages of the block is not performed. Instead, before data-updating processing, the top two blocks are used and the bottom

MRC/CET

two blocks are unused, and after data-updating processing the top and bottom blocks are unused and the middle blocks are used.

Thus, Estakhri and Yamazaki fail to teach or suggest all the elements of claim 6.

Chiba does not disclose or suggest all the elements of claim 6 either. In Fig. 11, Chiba is simply selecting an empty cluster and then updating the FAT and directory, taking care to erase data before updating again. In Fig. 12, Chiba searches for an empty cluster and afterwards updates FAT and Directory. The focus of Chiba is data erasing and write-in processing <u>in units of one block</u> (col. 2 lines 26-28 and lines 11-13, and Abstract).

<u>Thus, Chiba is not concerned with partial writing and disabling of a block.</u> Chiba does not disclose or suggest modifying the contents of the data management area in relation to the written data, writing the modified contents of the data management area into pages of another unused block in the recording medium, disabling other pages in the another unused block, and erasing the contents of the data management area in the one block, and turning the one block into an unused block. Furthermore, Chiba does not discuss a specific area which is a data management area in which managing data is stored as frequently changing information, and does not process contents of such a data management area by a sequence of steps which includes (6a) <u>writing</u> data into an unused block, (6b) <u>reading</u> contents of the data management area in said one block, (6c) <u>modifying</u> the contents of the data management area in relation to the written data; (6d) <u>writing the modified contents</u> of the data management area into pages of another unused block in the recording medium; (6e) <u>disabling other pages</u> in said another unused block of the step (6d).

Amended claim 9 depends from claim 1 and further recites "wherein the specific area is a data management area in which the managing data is stored as the frequently changing information, said method further comprising steps of: (9a) reading contents of the data management area in said one block in the recording medium, the contents being the managing data, when a data erasing operation is performed to the recording medium; (9b) modifying the contents of the data management area in relation to the data to be erased; (9c) writing the modified contents of the data management area into pages of an unused block in the recording medium; (9d) disabling other pages in said unused block of the step (9c), wherein the modified

MRC/CET

contents were not written in said other pages; (9e) erasing the contents of the data management area in said one block , and turning said one block into an unused block; and (9f) erasing the data to be erased, and turning a block where the data to be erased has resided, into an unused block."

With respect to claim 9, Estakhri and Yamazaki are not concerned with a specific area which is a data management area in which a managing data is stored as a frequently changing information. Estakhri and Yamazaki also do not disclose or suggest a data erasing process which includes reading contents of a data management area in one block, modifying the contents of the data management area in relation to the data to be erased, writing the modified contents of the data management area into pages of an unused block, disabling other pages in the unused block, erasing the contents of the data management area in said one block, and turning said one block into an unused block, and erasing the data to be erased, and turning a block where the data to be erased has resided, into an unused block. Writing modified contents of a data management area into pages of an unused block and disabling other pages in the unused block is not disclosed by Estakhri and Yamazaki. For example, in Figs. 10A-B in Yamazaki, before data-updating processing, the top two blocks are used and the bottom two blocks are unused, and after data-updating processing the top and bottom blocks are unused and the middle blocks are used.

Thus, Estakhri and Yamazaki fail to teach or suggest all the elements of claim 9.

Chiba does not disclose or suggest all the elements of claim 9, either. In Fig. 11, Chiba generally indicates that data is erased before updating. In Fig. 15, Chiba erases entire blocks out of a boot region. Chiba is concerned with data erasing and write-in processing in units of one block (col. 2 lines 26-28 and lines 11-13). Thus, Chiba is not concerned with partial writing and disabling of a block. Furthermore, Chiba does not discuss a specific area which is a data management area in which managing data is stored as frequently changing information, and does not perform an erasing process by a sequence of steps which includes (9a) reading contents of a data management area in a block; (9b) modifying the contents of the data management area in relation to the data to be erased; (9c) writing the modified contents of the data management area into pages of an unused block in the recording medium; (9d) disabling other pages in said unused block of the step (9c); (9e) erasing the contents of the data management area in said one block ,

MRC/CET

and turning said one block into an unused block; and (9f) <u>erasing the data to be erased</u>, and turning a block where the data to be erased has resided, into an unused block.

For all of the above reasons, taken alone or in combination, Applicant respectfully requests reconsideration and withdrawal of the 35 U.S.C. § 103 rejection of claim 1. Claims 3, 6, 9 and 11-18 depend from claim 1 and are allowable at least by virtue of their dependency.

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CONCLUSION

In view of the above amendments and remarks, this application appears to be in condition for allowance and the Examiner is, therefore, requested to reexamine the application and pass the claims to issue.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Corina E. Tanasa, Registration No. 64,042, at telephone number (703) 208-4003, located in the Washington, DC area, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

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